Type of Chulha		Amount of Central subsidy per chulha
(iii)	Scheduled Castes/Scheduled Tribes in other States/Union Territories	Rs. 50/-
High Altitude Chulha		
(i)	North East Region States	Rs. 450/-
(ii)	Jammu and Kashmir, Uttaranchal, Himachal Pradesh and hilly districts of West Bengal	Rs. 250/-

Non-Conventional Energy Sources in Bihar

2287. SHRIMATI KUM KUM RAI: Will the Minister of NON-CONVENTIONAL ENERGY SOURCES be pleased to state:

(a) what is the potential of Non-Conventional Energy Sources in different States, various energy sources-wise;

(b) whether its potential has been fully harnessed;

(c) whether Bihar is lagging behind in tapping the potentiality of non-conventional energy sources; and

(d) what efforts are being made to increase use of non-conventional sources of energy in Bihar?

THE MINISTER OF STATE OF THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (SHRI M. KANNAPPAN): (a) and (b) The Ministry of Non-Conventional Energy Sources has been implementing wide ranging programmes based on major sources such as solar, wind, small hydro and biomass for harnessing the potential of Non-Conventional Energy throughtout the country. The details of estimated potential and achievements made under various non-conventional energy programmes throughout the country, as on 31st March, 2002, are given in Statement-I (*See* below). Details of State-wise, estimated potential under major programmes of biogas, improved chulha, small hydro power, biomass power and wind power is given in Statement-II. (*See* below)

(c) and (d) The exploration of non-conventional energy potential is an ongoing and continuous process depending on the financial resources both public and private and technical feasibility and economic viability of available technologies in the States. The Ministry is exploiting available

non-conventional energy potential in the State of Bihar satisfactorily, the details of cumulative achievements made under various non-conventional energy programmes as on 31.3.2002, in the State of Bihar are given in Statement-III. (*See* below) To encourage and increase use of non-conventional energy in the State, the Ministry is providing various fiscal and financial incentives including interest subsidy and soft term loans under major programmes of non-conventional energy sources through Indian Renewable Energy Development Agency (IREDA), a public sector undertaking of this Ministry.

Statement-I

Revewable Energy Potential and Achievements under various programmes as on 31st March, 2002

	Source/System	Approximate Potential	Achievement (as on 31.03.2002)
A.	**Power from Renewables**		
1.	Solar Photovoltaic Power	—	1.99 MW
2.	Wind Power	45,000 MW	1628.2 MW
3.	Small Hydro Power (up to 25 MW)	15,000 MW	1437.47MW
4.	Biomass Cogeneration Power	19,500 MW*	381.3 MW
5.	Biomass Gasifier		51.3 MW
6.	Energy Recovery from wastes	1,700 MW	21.98 MW
	Power from Renewables (total)	**81,200 MW**	**3522.24 MW**
B.	**Decentralized Energy Systems**		
7.	Family-size Biogas plants	120 lakh	33.68 lakhs
8.	CBP/IBP/NBP Plants	-	3901 Nos.
9.	Improved Chulha	12 crores	3.52 crores
10.	Solar Photovoltaic Systems	20 MW/sq. km.	
	i. Solar Street Lighting Systems	-	41776 Nos.
	ii. Home Lighting Systems	-	206732 Nos.
	iii. Solar Lanterns	-	427687 Nos.

Source/System		Approximate Potential	Achievement (as on 31.03.2002)
	iv. Solar Photovoltaic Power Plants	-	1188 kWp
11.	SolarWater Heating Systems	140 million sq. m. Collector area	0.60 million sq.m. Collector area
12.	Solar Cooking System	-	5,18,000 Nos.
	i. Box-type Solar Cookers		
	ii. Concentrating-type Community Cookers	-	175 Nos.
13.	Solar Photovoltaic Pumps	-	4500 Nos.
14.	Wind Pumps	-	793 Nos.
15.	Hybrid Systems	-	127.5 KW
C.	**Other Programmes**		
16.	Aditya Solar Shops	-	29 Nos.
17.	Battery Operated Vehicles	-	247 Nos.
18.	Energy Parks	-	278 Nos.
19.	IREP Blocks	-	860 Nos.

Sq. km.=Square Kilometer; Sq. m.=Square meter; MW=Mega-watt KW=Kilo-watt; kWp=Kilo watt peak; IREP=Integrated Rural Energy Programme; CBP/IBP/NBP= Community/Institutional/Night-soil based Biogas Plants

*including Biomass Gasifier

Statement-II

State-wise potential estimates for major renewable energy resources

States/UTs	Family Type Biogas Plants Nos. in Lakh	Improved Chulhas No. in Lakh	Small Hydro Power (upto 25 MW) (MW)	Bagasse based Cogenera-tion (MW)	Wind power (MW)
1	2	3	4	5	6
Andhra Pradesh	10.66	97.08	255	200	8275
Arunachal Pradesh	0.08	1.5	1059		
Assam	3.08	36	118		
Bihar	9.40	123.83	368	200	

1	2	3	4	5	6
Goa	0.08	1.17	3		
Gujarat	5.54	50.72	157	200	9675
Haryana	3.00	20.61	30		
Himachal Pradesh	1.26	8.53	1625		
Jammu & Kashmir	1.29	11.75	1207		
Karnataka	6.80	60.76	653	300	6620
Kerala	1.51	40.73	467		875
Madhya Pradesh	14.91	101.58	410		5500
Maharashtra	8.97	96.5	599	1000	3650
Manipur	0.39	2.64	106		
Meghalaya	0.24	2.54	182		
Mizoram	0.02	0.73	190		
Nagaland	0.07	2.01	181		
Orissa	6.06	54.55	157		1700
Punjab	4.12	25.38	65	150	
Rajasthan	9.15	55.54	27		5400
Sikkim	0.07	0.73	203		
Tamil Nadu	6.16	80.16	339	350	3050
Tripura	0.29	4.65	10		
Uttar Pradesh	20.21	187.45	1473	1000	
West Bengal	6.95	98.72	183		450
Andaman & Nicobar	0.02	0.4	6		
Chandigarh	0.14	0.66			
Dadar & Nagar Haveli	0.02	0.25			
Daman & Diu	—	0.1			
Delhi	0.13	9.06			
Lakshadweep	—	0.1			
Pondicherry	0.04	0.59			

MW=Mega Watt.

Statement-III

Details of cumulative achievements made under various non-conventional energy programmes, as on 31-3-2002, in the State of Bihar

S. No.	Name of Programme	Cumulative Achievement as on (31-3-2002)
1.	Biogas Plants (Nos.)	1,21,979
2.	Community/Institutional/Night-soil-based biogas plants (Nos.)	44
3.	Improved Chulhas (Nos. in lakh)	11.87
4.	Integrated Rural Energy Programmes (Block in Nos.)	56
5.	Energy Parks (Nos.)	10
6.	Solar Photovoltaics (Nos.)	
	i. Solar Lanterns	44649
	ii. Solar Home Lighting Systems	781
	iii. Solar Street Lighting Systems	705
7.	Solar Photovoltaic Pumps (Nos.)	130
8.	Water Pumping Windmills (Nos.)	42
9.	Small Hydro Power (MW)	48.95
10.	Biomass Gasifier (kW)	20
11.	Solar Cooker (Nos.)	730

MW=Megawatt, kW=Kilowatt.

Power generation plant based on bio-mass in Hiviyur, Karnataka

2288. SHRI H.K. JAVARE GOWDA: Will the Minister of NON-CONVENTIONAL ENERGY SOURCES be pleased to state:

(a) whether Government have permitted M/s. R.K. Power ZEN Company to establish 'Power generation plant' based on bio-mass in Hiviyur, Karnataka;